

Question use in child mental health assessments and the challenges of listening to families

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Abstract

Background: The mental health assessment is a fundamental aspect of clinical practice and central to this is the use of questions.

Aims: The aim was to investigate the frequency and type of questions utilized within a child mental health assessment.

Method: The data consisted of 28 naturally-occurring assessments from a UK child and adolescent mental health service. Data were analyzed using quantitative and qualitative content analysis to determine frequencies and question type.

Results: Results indicated a total of 9086 questions in 41 hours across the 28 clinical encounters. This equated to a mean of 3.7 questions per minute. Four types of questions were identified; yes-no interrogatives, *wh*-prefaced questions, declarative questions and tag questions.

Conclusions: The current format of questioning may impede the opportunity for families to fully express their particular concerns and this has implications for service delivery and training.

Declaration of interest: None

Introduction

The clinical interview is a fundamental aspect of the therapeutic process and in mental health this interaction is essential in determining clinical need. Communication is a crucial aspect of this process and a core feature of this information-gathering is the use of appropriate questions. Despite the value and importance of questions, there has been little literature that has explored the use of questions in clinical interviews ⁽¹⁾, although texts on psychiatric interviewing promote the utilization of open questions ^(2; 3). The evidence that is available has demonstrated that questions exist across an information-seeking continuum, from the elicitation of factual information to those which allow the recipient a broader expression ⁽⁴⁾. The use of questions has specific purposes which relates to the institutional agenda ⁽⁵⁾ and in mental health assessments this agenda has the objective of ascertaining the presence or absence of a mental health condition. Typically this assessment is a multi-stage process and involves evaluating the current and past psychiatric symptomology, current social circumstances, and a risk assessment ⁽⁶⁾. The first assessment appointment in a Child and Adolescent Mental Health Service (CAMHS) serves a number of functions, including the prioritization and categorization of patients ⁽⁷⁾. These assessments ideally need to be comprehensive and extend beyond symptom identification to encompass the child's life context ⁽⁸⁾, and this process is particularly reliant on talk as a therapeutic medium. However, to date there has been limited research that has explored initial child mental health assessments in the psychiatric context ^(7; 8). While these assessments tend to follow a general trajectory culminating in clinically appropriate outcomes ⁽⁹⁾, the mechanisms which achieve these outcomes has received little attention in the research literature. The aim of our research, therefore, was to examine the use of questions in child mental health first assessments to examine the reality of the clinical encounter.

Methods

For this study we present a content analysis to highlight the overall number of questions asked by clinicians and to demonstrate the different types of questions asked in the child mental health assessments.

Context and setting

The research used data from 28 families who attended their first assessment appointment at a UK based CAMHS. The appointments were video-recorded following consent and each of these lasted for approximately one hour and thirty minutes, which resulted in a data set of 2458 minutes. Data were collected over a period of six months and all new cases were approached to participate, with the exception of acute cases and those who required an interpreter. As is typical for initial assessments, the families were seen by a minimum of two mental health clinicians (with the exception of one family) and the study captured all 29 clinicians within the triage team at least once. The team was inclusive of a range of professional groups and this included consultant, staff-grade and trainee child and adolescent psychiatrists (10), clinical and assistant psychologists (5), learning disability nurses (1),

community psychiatric nurses (5), occupational therapists (4) and psychotherapists (2), as well as medical students and student nurses. Included in the study were 28 children; 64% were male and 36% were female. The mean age of the children was 11 years, ranging from 6-17 years. Typically children attended with their mothers (27) and 8 were accompanied by their fathers. Six were accompanied by maternal grandmothers and in some cases another family member, siblings and/or professional known to the family.

Data analysis

Content analysis was employed to investigate question frequency and type. This quantitative method allowed the counting of particular instances within a data set to determine their frequency ⁽¹⁰⁾. To ensure integrity of the frequency and content, a coding frame was developed and this provided the framework for determining the number of instances of any given phenomena ⁽¹¹⁾. **Coding frames are a data-driven method of organizing data into a number of categories of similar content from the clinical assessments. This then provides data on the frequency of particular issues of analytic concern.** Although content analysis is predominantly a descriptive quantitative method, qualitative content analysis can also provide additional depth to present an empirical analysis of the communication ⁽¹²⁾. A complementary qualitative content analysis was provided to illuminate particular examples of the frequency coding where useful.

Ethics

Ethical approval was granted for the study by the National Research Ethics Service (NRES). In line with ethical principles, consent was obtained from clinicians, parents, children and any other attendees. Consent forms and information sheets were posted with the appointment letter up to three weeks in advance, but consent was taken on the day of the appointment.

Results

During the 28 mental health triage assessments a total number of 9086 questions were asked to families by clinicians in the assessments. There was an average therefore of 323.9 questions per assessment ($SD = 106.56$), ranging from 169 to 588 questions. The total number of questions directed towards parents (also including grandparents and other adult family members) was 3714. This led to an average of 132.7 questions per assessment, ranging from 23 to 386. The total number of questions directed towards the children was 5327. This led to an average of 190.3 questions per assessment ranging from 55 to 531. Some questions were not directed towards any member of the family specifically and thus were ambiguous in terms of next speaker selection; there were 45 of these in total. This is summarized in table 1.

INSERT TABLE 1 HERE

The mean number of questions asked in the whole data corpus per minute was 3.7 ($SD = 0.99$). The range of questions was between 2.21 questions per minute and 6.03 questions per

minute. This sub-divided to a mean of 1.51 questions per minute directed towards adult family members ($SD = 1.02$) and 2.17 questions per minute directed toward the child ($SD = 0.73$). Notably there was no significant difference in the number of questions asked according to gender ($t = .351$ (df 26) $p > 0.05$) and there was no significant difference in the number of questions asked according to the age of the child ($t = -0.93$ (df 26) $p > 0.05$). The content analysis coding framework in the form of the final frequencies of question types is presented in table 2.

INSERT TABLE 2 HERE

A broad taxonomy of question types was synthesized to illustrate the prevalence of different question types. Following Tracy and Robles (2009) broad classification of question types the 16 original codes were thematically organized into different types:

1. Yes-no interrogatives (those that require a yes or no answer),
2. *Wh*-prefaced questions (e.g., who, when),
3. Declarative questions (those that make a statement such as ‘it was blue?’).

Additionally the category of tag questions was added as this did not fall within these three types. Tag questions are those short questions ‘tagged’ onto the end of a statement (e.g., you went to town, did you?). The category of ‘other’ from the original coding frame was excluded for analytic purposes. It is recognized that this is a simplification of question types, but in line with qualitative content analysis we thematically grouped the questions to interrogate the key issues at stake for the research question.

In the whole data corpus there was a total of 3659 yes-no interrogative questions asked. This type of questioning practice included do/did/does, any, has/have, is/was, are and would/could/can questions. Of these 1412 were directed toward parents/adult family members, 2226 were directed toward the children and 21 had no selected recipient.

Wh- type questions accounted for 3093 questions, of which 1167 were directed towards parents/adult family members, 1920 were directed toward the children and 6 were ambiguous in terms of speaker selection. This group of questions consisted of what, why, how, who, where, when, and which prefaced questions.

A total of 1495 declarative questions were asked in the corpus. Of these 810 were directed toward parents/adult family members, 683 were directed toward the children and 2 were ambiguous.

The data corpus included a total of 579 tag questions, of which 196 were directed towards parents/adult family members, 371 were directed toward the children and 13 were ambiguous. A summary is presented in table 3.

INSERT TABLE 3 HERE

Some exemplars of the four question types that were identified are given below in order to provide a qualitative indication of the nature of these particular categories. In these data extracts all mental health clinicians were abbreviated to 'MHC' to include all disciplinary groups. Additionally where words were emphasized by the speaker, this was represented by underlining the word.

Yes-no interrogative questions

This category of question constituted a sub-type of a closed question which normatively precipitates an answer in the form of 'yes' or 'no'.

Extract 1: Family 9

MHC do you have any friends at school
Child yeah

Extract 2: Family 8

MHC is that every day that something happens in school?
Child ((child shakes head))

In each of these extracts the closed nature of the question type was substantiated by the response of the child (extract one 'yeah' and extract two a non-verbal 'no' was given). Both 'do'-prefaced and 'is'-prefaced questions are clear examples of closed yes-no interrogative questions that warrant by their nature a simple 'yes' or 'no' response.

Wh-prefaced questions

Wh-prefaced questions are open questions that utilize a questioning word beginning with 'wh' (and include 'how' questions). They typically elicit more information than a simple 'yes' or 'no' response and leave room for description or opinion.

Extract 3: Family 16

MHC why do you take that?
Child I don't know

Extract 4: Family 1

MHC how often do you do the touching?

Child erm quite often like when I'm sorting my clothes out and that

Although the open 'why' question in extract three offered an opportunity for the child to provide an extended response, the child gave a minimal answer '*I don't know*'. In contrast, the 'how' question in extract four elicited a more comprehensive answer from the child who not only described 'how often' the behavior occurred, but also the contexts in which that behavior was engaged in.

Declarative questions

Declarative questions are a sub-type of closed questions which have a slight bias towards eliciting responses that agree with the statement in the question. This type of questions usually has the syntax of a declarative sentence ⁽¹³⁾.

Extract 5: Family 1

MHC but that time with your sister you did get the images?
Child yeah

Extract 6: Family 2

MHC so it wasn't the best day?
Child ((*child shakes head*))

In both extracts five and six, the declarative question asked by the mental health clinician elicits an affirmative response from the child. Although syntactically the questions took the form of a statement, the rising intonation at the end of the sentence and the uptake (response) from the child demonstrated that this was asked in a questioning style.

Tag questions

Tag questions are also a subtype of closed questions which transform a declarative statement into a question through the addition of an interrogative 'tag' ⁽¹³⁾.

Extract 7: Family 9

MHC it's amazing when you've got loads of them isn't it?
Mum yeah

Extract 8: Family 18

MHC he only comes at the weekends did you say?
 Child yeah

The primary function of a tag question is the elicitation of agreement. In extracts seven and eight the tag questions ('*isn't it?*' and '*did you say?*') performed a confirmation-seeking function within the interaction. This is evidenced in both cases by the affirmative response from both mother and child.

Agenda-oriented mechanisms

In the data it was clear that mental health clinicians oriented to a pre-specified agenda which included categories of particular kinds of assessment-relevant questions. In order to fulfill the requirements of addressing each of these areas, mental health clinicians appeared to impede opportunities for families to discuss topics in a more narrative form or outside of that agenda.

Extract 9: Family 20

MHC Okay just conscious of the time we need to talk about
 your school. Which school are you going to?
 Child ((names school))

Extract 10: Family 16

MHC ok this is now where I've got to ask mum a few questions
 about when you were a baby Kolomban alright?

In both of these extracts the mental health clinician clearly oriented to the necessity to ask questions related to a particular topic '*we need to*' and '*I've got to*'. This indicated that the questions being asked were an essential part of the intrinsic nature of the triage assessment. A particular strategy in extract 9 re-oriented the conversation to the triage agenda was to draw attention to the limited amount of time available '*just conscious of the time*'.

Extract 11: Family 13

MHC I'm gonna ask you questions about development now so
 where was Kip born
 Mum erm at home

Another strategy that appeared to be useful in circumventing tangential discussions from family members was to forewarn the family by making an announcement that a particular series of questions within a category were next on the agenda '*I'm gonna ask you questions*

about development now'. This had the effect of focusing the family on a specific issue predetermined by the mental health clinician.

Extract 12: Family 3

Mum so he's never slept out at a friend's or anything he
 won't go
MHC Ok right well we'll come to that in a minute

In this extract the child's mother introduces a new piece of assessment-relevant information about her son not sleeping at friends' houses. However, at this point in the session the mental health clinician chose not to pursue this further, instead indicating that the issue would be returned to at a later point. This suggests that the mental health clinician had other more pressing topics to address.

Extract 13: Family 5

MHC because finished everything so I'll have to give you
 another appointment and er then I'll ask the rest of the
 things I need to ask

This extract was taken from near the end of a session and indicates that the mental health clinician had not finished asking all the questions on the agenda. Thus, it was proposed that a second appointment was necessary so that this could be completed '*I'll ask the rest of the things I need to ask*'. The use of the phrase '*need to*' demonstrates that eliciting answers to particular questions were necessary in informing a final decision.

In this dataset of 28 triage assessments just over half (16) resulted in a decisive outcome with 10 children being referred into CAMHS for treatment and 6 being discharged from the service. The mean number of questions asked of those with a clear outcome decision was 332.31 ($SD=121.7$). However, 9 of the families were offered a second appointment in order to clarify service need and complete the assessment process. Additionally in 3 cases a decision was suspended to allow time for wider team consultation. The mean number of questions asked in families without a clear outcome was 308.83 ($SD=85.64$). However, there was no significant difference in the number of questions asked in families with a clear decision outcome and those without ($t=.57$ ($df\ 26$), $p=.574$).

Discussion

Findings

The assessment of children's mental health is a multifarious process and it is evident that children and families are expected to provide a considerable volume of information. On

average the clinicians asked 3.7 questions per minute, with an average of 323.9 per assessment over an average of 80 minutes. Variability was evidence across the data in relation to quantity of questions and also in the selected recipient of those questions, either child or adult. Interestingly, the age or gender of the child appeared to have no effect on the proportion of questions they received. Approximately two thirds of questions were of a closed style and this included yes-no interrogatives, declarative and tag questions and this approximate proportion was evident in both questions to adults and children. The yes-no-interrogatives were the most commonly asked question type and tag questions the least commonly used. **Declarative questions were asked more frequently of adults than children, which may reflect clinician concerns regarding children's linguistic competence to recognize a declarative as a question. The recognition of a declarative as a question requires an understanding of its prosodic features (such as intonation), its sequential position and its syntax** ⁽¹⁴⁾. Furthermore, mental health clinicians' references to the time limitations of the session and the need to address particular areas precipitated the use of directive strategies to maintain adherence to the agenda of the assessment. The number of questions asked in the assessment did not appear to reflect whether an outcome was achieved at the end of one session.

Recognition of declaratives as 'questions' (i.e. requiring confirmation/disconfirmation) depends on sequential, prosodic and epistemic features, not syntax alone (Stivers & Rossano, 2010)

Findings in the context of past research

To date there has been very limited research exploring the processes of child mental health assessments, particularly in relation to questions. Indeed there is virtually no empirical research on frequency or prevalence of questions or on question types. Although psychiatry training promotes the use of open questions ^(2; 3; 15), closed questions were in fact much more common, and tended to take the form of yes-no interrogatives. This is despite psychiatry as a discipline relying on the patient narrative ⁽¹⁾. Interestingly there is no comparative work within other fields of psychiatry however there is a small body of research within general practice, pediatrics, and family therapy which focus on questions ^(16; 17). For example, the use of 'some' versus 'any' in meeting unmet concerns has shown the impact of slight changes to question style ⁽¹⁸⁾. While there is extensive literature on doctor-patient communication, including the use of naturally-occurring data, very little has focused specifically on content, style or frequency of questioning more specifically, particularly with children who have mental health problems. It was evident that the questioning style was influenced by the remit of the assessment process and time constraints, and this is a common feature across institutional settings; see ⁽⁵⁾.

Strengths and limitations

Naturally-occurring data provides a representation of the clinical environment and demonstrates good ecological validity as its claims are grounded in actual practice and should be seen as complementary to other research methods. Although the data corpus consists of 28 clinical cases this correlates with 41 hours of recorded data, which provides significant insight to the interactions between clinicians and families. A number of factors such as the problem presentation and clinician's disciplinary background may have an influence on the style of questioning however a more extensive data set would be required to quantify this relationship. Nonetheless the data does demonstrate some clear **commonalities across clinicians in terms of the ways in which they question children in terms of the frequency, style and types of questions asked. It is acknowledged that other supportive strategies were used with children who have less competent communication skills, such as younger children or those with a learning disability, but even when these were employed the primary mechanism of obtaining information was through questioning.** Additionally it is difficult to benchmark our findings to determine a 'normal' question frequency and prevalence range due to the paucity of the literature in this area. While guidance is available on the use of open/closed questions ^(3; 14), the evidence-base remains limited. It is recognized that our sample was exclusively drawn from one UK-based service, which may potentially limit its generalizability. However, the assessment of child mental health is a common practice internationally with the central universality of questions underpinning their trajectory and thus the findings do have some transferability across national and international contexts.

Implications for services

Recording clinical practice provides a unique insight into the processes within mental health interactions and provides opportunities to inform contemporary practice and training, and thus has implications for the delivery of child mental health services.

Listening to families' concerns is an essential component of clinical practice and it is recognized that poor communication is a determining factor in patient complaints ⁽¹⁹⁾. The institutional agenda and time constraints can potentially distract from embracing the more human aspect of the work which highlights a tension within the system. Regulatory bodies including the General Medical Council (2013) ⁽²⁰⁾ have highlighted the need to communicate effectively with patients. While there is a drive for patient-centered communication ⁽²¹⁾, there are few mechanisms with which to demonstrate this skill. The workplace-based assessments of psychiatrists in training do provide some feedback however further empirical evidence would be useful in guiding their supervisors. All professionals who work with children may benefit from additional training on interviewing children. In particular clinicians may benefit from paying further attention to the ways of eliciting information and engaging children ^(see e.g., 22), **both verbally and through non-verbal means, such as play, the use of visual aids, other activities, which may be better suited to younger children or those with communication difficulties.**

The agenda-oriented mechanisms employed juxtaposed with the considerable reliance on closed questions, may potentially restrict the narrative of children and families. These mechanisms may reflect the time-constraints imposed on clinicians however, there was no evidence that the clinical care provided was sub-optimal or that practice deviated from accepted levels of care. Cost-effective practice is a continued struggle between conflicting pressures but it is important that a reflective position on contemporary practice is adopted to safeguard continued quality care. Clinical models do vary between services with some adopting particular frameworks and while many lack an evidence-base, the assessments must remain a core and productive process. This is especially relevant with the advent of episode-based payment systems where the commissioning of care may be more targeted ⁽²³⁾. **A suggested method of allowing more narrative space** would be to the use of pre-assessment questionnaires, **particularly in obtaining demographic information**. This is important as the patient's perspective in medical interviews is often lost **during this information-gathering** and a more narrative-based approach may be beneficial ⁽²⁴⁾. **However, the evidence-base on the use of pre-assessment questionnaires is currently limited and whether they would be useful in allowing patients to express themselves is unclear. Problematically, it could also lead to duplication of information-gathering processes if the questions are repeated during the assessment. Anecdotally, clinicians may use this demographic information-gathering to enhance the rapport with the families by using many non-threatening closed style questions, and thus may be reluctant to use a pre-assessment questionnaire instead. Regardless of the method of information-gathering,** the additional value for child mental health of providing a greater narrative space is that it allows more time for children to express their views and concerns which are compatible with the growing literature on children's rights to participate in decisions ⁽²⁵⁾.

Conclusions

In clinical practice, while the fundamentals of a good assessment are clear to most practitioners, there remains a tension with cost-effective service delivery which can adversely affect the process. Improved clinical outcomes are dependent upon the therapeutic relationships which develop early in the patient experience. Asking one question every 15 seconds may be counter-productive to this process, and closer attention needs to be paid to the communication strategies employed in clinical practice. This work has highlighted the need for a closer examination and further research using larger sample sizes across a broader range of mental health settings. **Investigating the clinical questioning style in different disciplinary groups may allow cross-fertilization of good practice, but it would also be useful to examine the questioning style in other specialties involved with children such as pediatrics. In addition, there is a need to further examine the training strategies of mental health clinicians, both trainees and qualified.**

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